Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method for modulating sphingolipid-cholesterol microdomains in a patient in need of such modulation comprising:

administering to the patient at least one ganglioside, ganglioside derivative *which occurs as a structural element of cell membranes in nerve cells* or cholesterol derivative *which is formed from cholesterol in only one reaction step* in a sphingolipid-cholesterol microdomain modulating effective amount.

2. (Currently amended) ~~A~~ The method ~~according to claim 1, wherein said~~ for influencing the location of components and their function on/in the sphingolipid-cholesterol microdomains in a patient in need of such influencing comprising:

administering to said patient at least one ganglioside, ganglioside derivative or cholesterol derivative ~~influences the~~ in an amount effective to influence the location of components and their function on the sphingolipid-cholesterol microdomains.

3. (Currently amended) ~~A~~ The method according to claim ~~1~~ 2, wherein ~~said at least one ganglioside, ganglioside derivative or cholesterol derivative influences the location of~~ said components are proteins ~~on/in the sphingolipid-cholesterol microdomains~~

4. (Currently amended) ~~A~~ The method according to claim 3, wherein said ~~at least one ganglioside, ganglioside derivative or cholesterol derivative influences the location of~~ proteins are anchor proteins, acylated proteins, Src kinases and/or cholesterol-anchored proteins and other raft proteins.

5. (Currently amended) ~~A~~ The method according to claim 3, wherein said ~~at least one ganglioside, ganglioside derivative or cholesterol derivative acts on~~ proteins are glycosylphosphatidylinositol anchor proteins, kinases of the Src family, influenca virus hemagglutin and other viral proteins and/or caveolin-1, 2 or 3 in the sphingolipid-cholesterol microdomain.

6. (Currently amended) ~~A~~ The method according to claim ~~1, wherein said at least one ganglioside, ganglioside derivative or cholesterol derivative brings about a disassembly of the~~ 2, wherein said components are protein clusters and wherein said effective amount is a protein cluster disassembling effective amount.

7. (Currently amended) ~~A~~ The method according to claim 1, wherein said at least one ganglioside is a bovine brain ganglioside, GM_1, GD1a, GD1b, GD3, GM2, GM3, GQ1a, GQ1b, or a globoside.

8. (Currently amended) ~~A~~ The method according to claim 1, wherein at least one cholesterol derivative is administered.

9. (Currently amended) A method ~~according to claim 1, wherein the modulation of the sphingolipid-cholesterol microdomain brings about a change in~~ for changing membrane transport, signal transmission and/or cell adhesion properties and/or enzymic processes in a patient in need of such change comprising:

administering to said patient at least one ganglioside, ganglioside derivative or cholesterol derivative in an membrane transport signal transmission and/or cell adhesion properties and/or enzymic processes changing effective amount.

10. (Currently amended) A method ~~according to claim 1, wherein the modulation of the sphingolipid-cholesterol microdomain brings about a change in~~ for changing the proteolysis of the amyloid precursor protein of Alzheimer's disease or ~~a modification in~~ modifying a prion protein in a patient in need of such change or modification comprising:

administering to said patient at least one ganglioside, ganglioside derivative or cholesterol derivative in an amount effective to change the proteolysis of the amyloid precursor protein of Alzheimer's disease or modify a prion protein.

11. (Currently amended) A method ~~according to claim 1, wherein the modulation of the sphingolipid-cholesterol microdomain prevents~~ for preventing the phagocytosis of bacteria and parasites in mammalian cells comprising:

contacting said mammalian cells with an amount of at least one ganglioside, ganglioside derivative or cholesterol derivative effective for preventing the phagocytosis of bacteria and parasites.

12. (Currently amended) A method ~~according to claim 1, wherein the modulation of the sphingolipid-cholesterol microdomain prevents~~ for preventing the uptake of viruses into mammalian cells and/or their transport and release comprising:

contacting said mammalian cell with an amount of at least one ganglioside, ganglioside derivative or cholesterol derivative effective for preventing an uptake of viruses into mammalian cells and/or their transport and release.

13. (Currently amended) ~~A~~ The method according to claim 1 wherein at least one ganglioside is administered.

14. (Currently amended) ~~A~~ The method according to claim 1 wherein at least one ganglioside derivative is administered.

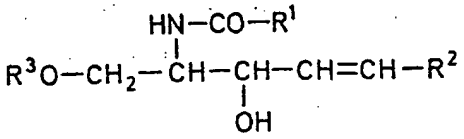
15. (Previously presented) A method for modulating sphingolipid-cholesterol microdomains in a patient in need of such modulation, comprising administering at least one ganglioside, ganglioside derivative or cholesterol derivative to the patient at a dose of from 3 mg to 30 mg per kg body weight per day.

16. (Currently amended) ~~A~~ The method according to claim 1, wherein said at least one ganglioside derivative is a derivative of sphingosine or ~~ceraminde~~ ceramide.

17. (Currently amended) ~~A~~ The method according to claim 16, wherein said derivative comprises at least one monosaccharide unit, wherein said at least one monosaccharide unit is D-galactose, N-acyl-D-galactosamine, D-glucose or N-acetylneuraminic acid.

18. (Currently amended) ~~A~~ The method according to claim 16, wherein said ganglioside derivative is a derivative of sphingosine.

19. (Currently amended) ~~A~~ The method according to claim 16, wherein said ganglioside derivative is a derivative of ceramide of the formula:



wherein R^1 is a long chain C_6-C_{30} fatty acid residue, R^2 is a long chain C_6-C_{30} alkyl residue and R^3 is H or a glycoside.

20. (Canceled)

21. (Canceled)

22. (Currently amended) ~~A~~ The method according to claim 19, wherein a functional group selected from the group consisting of an alcohol group, an ether group, a carbonyl function, a carboxylic acid group, a carboxylic anhydride group, a carbamoyl group, a haloformyl group, a cyano group, an ester group, a lactone group, a benzyl group, phenyl group, tolyl group, tosyl group, sulfonyl group, an amino group, an isocyanate, a cyanate, a thioisocyanate, a thiocyanate, a carbamate, an azide, a diazo group, a quinone group and a halide substituted alkyl, alkenyl, alkynyl or aryl radical, is substituted or added on the backbone chain.

23. (Canceled)

24. (Currently amended) ~~A~~ The method according to claim ~~20~~ 22, wherein the long chain fatty acid residue is a C_8-C_{24} fatty acid residue.

25. (Currently amended) ~~A~~ The method according to claim ~~21~~ 22, wherein the long chain alkyl residue is a C_8-C_{24} alkyl residue.

26. (Currently amended) ~~A~~ The method according to claim 1, wherein said at least one cholesterol derivative is cholesterol sulfate or cholesterol thiosulfate.

27. (Currently amended) ~~A~~ The method according to claim 1, wherein said at least one cholesterol derivative comprises at least one substituted or added organic group.

28. (Currently amended) ~~A~~ The method according to claim 27, wherein said at least one organic group is an alcohol group, an ether group, a carbonyl function, a carboxylic acid group, a carboxylic anhydride group, a carbamoyl group, a haloformyl group, a cyano group, an ester group, a lactone group, a benzyl group, phenyl group, tolyl group, tosyl group, sulfonyl group, an amino group, an isocyanate, a cyanate, a thioisocyanate, a thiocyanate, a carbamate, an azide, a diazo group, a quinone group or a halide substituted alkyl, alkenyl, alkynyl or aryl radical.

29. (Currently amended) ~~A~~ The method according to claim 8, wherein said at least one cholesterol derivative comprises at least one oligopeptide, oligonucleotide, amino acid, monosaccharide, disaccharide or polysaccharide.

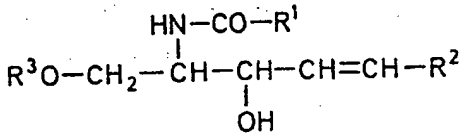
30. (Currently amended) ~~A~~ The method according to claim 14, wherein said at least one derivative is ~~a~~ an unsaturated sphinogosine or ceramide containing unsaturated or short C_2-C_{18} fatty acids.

31. (Currently amended) ~~A~~ The method according to claim 8, wherein said at least one cholesterol derivative is a cholesterol sulfate.

32. (Withdrawn) A pharmaceutical composition comprising at least one unsaturated sphingosine or ceramide, wherein said at least one unsaturated sphingosine or ceramide is structurally substantially identical to at least one unsaturated sphingosine or ceramide that is a constituent of a sphingolipid-cholesterol microdomain, and a pharmaceutically acceptable carrier therefore.

33. (Withdrawn) The pharmaceutical composition of claim 32, wherein the C1 oxygen of said sphingosine is substituted with a sugar moiety and the C2 amino group is substituted with a saturated or unsaturated fatty acid.

34. (Withdrawn) The pharmaceutical composition of claim 32, wherein the said at least one ceramide has the formula:



wherein R^1 is a long chain fatty acid residue, R^2 is a long chain alkyl residue and R^3 is H or a glycoside.

35. (Withdrawn) The pharmaceutical composition of claim 34, wherein the long chain fatty acid residue is a C_6-C_{30} fatty acid residue.

36. (Withdrawn) The pharmaceutical composition of claim 34, wherein the long chain alkyl residue is a C_6-C_{30} alkyl residue.

37. (Withdrawn) The pharmaceutical composition of claim 34, wherein a functional group is substituted or added on the backbone chain.

38. (Withdrawn) The pharmaceutical composition of claim 37, wherein said functional group is an alcohol group, an ether group, a carbonyl function, a carboxylic acid group, a carboxylic anhydride group, a carbamoyl group, a haloformyl group, a cyano group, an ester group, a lactone group, a benzyl group, phenyl group, tolyl group, tosyl group, sulfonyl group, an amino group, an isocyanate, a cyanate, a thioisocyanate, a thiocyanate, a carbamate, an azide, a diazo group, a quinone group or a halide substituted alkyl, alkenyl, alkynyl or aryl radical.

39. (Withdrawn) The pharmaceutical composition of claim 35, wherein the long chain fatty acid residue is a C_8-C_{24} fatty acid residue.

40. (Withdrawn) The pharmaceutical composition of claim 36, wherein the long chain alkyl residue is a C_8-C_{24} alkyl residue.